NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Review: 3 types of experiments

1. 300 graduate students in psychology volunteer to be subjects in an experiment. The purpose of the experiment is to look at the effect of a drug that is supposed to help students focus. We want to see the effect that both dosage level (200mg, 500mg, 750mg) and type of drug (drug A or B) have on a performance task. We will be measuring the students’ scores on the performance task.

* 1. Should we include a placebo? Justify.
  2. What are the treatments? (there are 8 of them)
  3. What are the explanatory variables? (there are 2 of them)
  4. What is the response variable?
  5. Who are the individuals/subjects?
  6. Design a completely randomized experiment:
  7. What are some lurking/confounding variables?
  8. Could this experiment be double blind? Why/why not?

1. You have developed a weight loss treatment that involves exercise and a diet pills. You have 400 overweight volunteers. You are looking at 3 types of exercise programs (low, medium, high) and 2 types of diet pills (50mg and 100mg). You will measure the percent of weight lost by the subjects.
   1. Should we include a placebo? Justify.
   2. What are the treatments?
   3. What are the explanatory variables? (there are 2 of them)
   4. What is the response variable?
   5. Who are the individuals/subjects?
   6. What are some lurking/confounding variables?
   7. We know that of the 400 overweight volunteers, 100 have high stress jobs, 200 low stress jobs, and 100 have no jobs. Using this information, design a block design experiment:
   8. This experiment has parts of it that can be double/single blind, and parts that cannot. Explain.
2. A study of reactions to different types of advertising is to be carried out. Two different versions of ads for the same product are to be tested. The organizer wants to see which version people prefer. There are 130 people available for the experiment.
   1. What are the treatments? (there are 2 of them)
   2. What is the explanatory variable?
   3. What is the response variable?
   4. Who are the individuals/subjects?
   5. Design a matched pairs design experiment:
   6. Gender is a lurking variable. Of the subjects, 50 are men and 80 are women. Re-do your matched pairs design, but block for gender as well.